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This report describes the progress of students supported by an AASERT award.

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## Annual Technical Report - AASERT Award

F49620-92-J-0073

May, 1992 - April, 1993

### Spectroscopy and Dynamics of Vibrationally Excited Molecules

#### Students Supported and Progress

##### Martin J. Coffey

The AASERT award provide support for Marty during his first summer in graduate school and during a portion of his second year. He made good progress in learning about the laboratory and beginning initial design of an optical parametric oscillator for our collisional energy transfer and spectroscopy experiments. His grades are good and he is making normal progress toward his Ph.D.

##### Mark D. Fritz

The AASERT award provided partial support for Mark during his fifth year in graduate school. During this time he extended our collisional energy transfer studies, in collaboration with a post-doctoral associate, making measurements on relaxation in  $C_2H_2$  containing four quanta of vibrational excitation. He also performed our first vibrational overtone excitation experiments on formaldehyde, providing excellent spectroscopy data that have already motivated calculations by a post-doctoral associate.

##### Donald E. Govoni

The AASERT award provided a small amount of support for Don during his final year in graduate school. He helped develop transient grating techniques that we hope to apply to our AFOSR sponsored projects. His participation in the AFOSR sponsored work was a minor component of his graduate study. His grades are good and he is making normal progress toward his Ph.D.

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